

ABSTRACT

A composition for promoting repair of damaged tissues, being a cross-linked alginate solution, which can be maintained in liquid form indefinitely (under constant conditions) and only gels *in vivo*. This cross-linked alginate solution is an ideal material to be used for tissue repair. Injection of said material into cardiac tissue post-myocardial infarct induced tissue regeneration. The invention provides such injectable solution, as well as compositions and method of preparation thereof. The invention also provides various methods and uses of the cross-linked alginate solution, for cardiac tissue regeneration, induction of neo-vascularization, enhancing SDF-1 expression and guiding stem cell chemotaxis, among others. A kit for tissue repair is also provided.